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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,827	08/24/2000	Toshiki Taru	50395-068	5605

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McDermott Will & Emery
600 13th Street N W
Washington, DC 20005-3096

EXAMINER

HOFFMANN, JOHN M

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 10/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/622,827

Applicant(s)

TARU ET AL.

Examiner

John Hoffmann

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3,6,7,9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

Newly submitted claim 10 is directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Original claim 10 was directed to the specie where the heater is outside a vicinity of the upper end. Claim 10 is now directed to where the heater is "in" the vicinity. These are two mutually exclusive species. Claim 1 is generic to both species.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claim 10 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Drawings

The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 9-24-2000 have been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

Claims 2 -4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2, lines 3-4 refers to "said respective plural partitions of separating plates". It is unclear what this requires, since claim 1 does not require plural partitions or plural plates or anything that is "respective". Also claim 2 does not require that the "two or more partitions" have any separating plates, nor that the "two or more partitions" are related to the partitions of claim 1. One would be confused as to the number of plates and partitions are required and as to what structure each must have.

Claim 4: it is unclear if the line 2 "plural partitions" is suppose to refer to the partitions of claim 1 or the partitions of claim 2. Reading the claims in light of the specification, it is understood that the partitions of claim 2 (line 2) can be the partitions of claim 1 - but the claims do not require this.

Response to Amendment

The amendment to the specification has not been entered - there is no clean copy of the paragraph. The amendment to the claims has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 4-5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi 6-199536.

See figure 2: Tubes 13 and 15 are deemed to comprise the muffle tube. The upper tube is deemed to be an "inner tube" in that it would have been obvious to have the structure indoors to keep the elements off of it. As to the steps of arranging, melting, drawing, blowing, descending etc. such are method of use steps and have no importance in an apparatus claim. Alternatively, any relevance they have is clearly met by the reference 26 is a set of two plates. 28 is the a gas blowing port. \

As to the newly added step of "descending with said preform", such is a method of use. Clearly one could use a large preform in the Kobayashi apparatus, so that the plate has to lower (while a fiber is being drawn) prior to being in contact with the tube. Alternatively, one could use the disclosed apparatus as follows: stretch the preform into a longer preform (the stretching done inside the furnace, or by a method step of disassembling the furnace, stretching, then reassembling), then draw a fiber from the preform, wherein the drawing begins with the plate being a short distance (0.5 cm) above the tube - and thus being lowered as the drawing continues. The claims clearly do not require the descending to occur during the entirety of the drawing.

Claim 2, line 2, requires "two or more partitions". However, there is no requirement that these partitions are part of the "one or more partitions". It is deemed

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that these can be additional partitions of another nature - that need not be separating plates. Any of the following features are deemed to be partitions: 17, 13, 15, 18, 14.

As to the "said respective plural partitions of separating plates", it is noted that there is no requirement anywhere that there be "plural partitions of separating plates" Claim 1 is directed to the genus which permits the specie of a single partition/plate and the specie of plural plates. Claim 2 does not explicitly further limit claim 1 to the specie of plural plates: claim 2 only limits an invention that meets the plural plate specie. In other words, claim 2 does not require the more-than-one specie - it merely limits that specie if that is the specie which is being compared to the claim. Since claim 2 does not limit the single "set" specie, it does have any limitation that would exclude Kobayashi - which is a member of the single set specie.

Likewise, claim 4 limits the plural sets - but not a single set. Unlike claim 2, it has other limitations (such as to the dummy rod). However all of these limitations are relative to the plural sets. There is no limitation that is relative to a single set. Thus it is deemed that the limitations are directed to the specie where there are plural sets and have no relevance on the specie where there is but a single set.

Claim 5 is clearly met.

Claim 8: heat insulating is a relative term - it is inherent that the plate would provide at least some radiative or convection insulative effect.

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Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito 6138481.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15. Although a translation has been submitted, it is not in accordance with 37 CFR 1.55 - namely there is no statement that the translation is accurate. Further, the top of page 13 of the translation is missing.

Looking to figure 1 of Saito. The preform is clearly supported by the dummy rod 2B at an upper part thereof. However there is no indication that the upper part was within muffle tube - it would have been obvious that the upper end of the dummy rod was inside muffle tube 9, otherwise, the lower end of the preform 1, could never have been melted to be drawn thinner.

As to the inner tube being connected to an end of the muffle tube, it is noted that Saito tube 9 is shown to be suspended in the middle of chamber 5. Clearly some structure must be used to the other structure - otherwise it will fall. IT would have been obvious to provide something connect to the tube to the other structure. Further, it would have been obvious to do the connections at one of the ends of the tube, since those are the cooler ends, and if the connections were at the middle of the tube (9) it would be additional thermal mass that would likely cause uneven heat distribution. An end is clearly the most convenient place to connect the tube. And since tube 8a is connected to the rest of the structure, the two tubes are at least indirectly connected to

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each other. As indicated in Applicant's drawings, the two tubes the don't appear to be directly connect, there appears to be structure in between them. One would not assume that Applicant intended to require a direct connection - which could easily be overcome by using a spacer material between the tubes.

AS to the step of melting, it would have been obvious to melt the rod and draw it into a fiber after it is stretched by the Saito method, because its intended use is to be melted and drawn to form a fiber.

As to the last half of the claim, it starts out "while one set or plural sets of separating plates are arranged...." There is not a positive recitation of a step of arranging plates - so it is not interpreted as such. If applicant wishes to recite a particular step, it should be clearly indicated as such. The claim makes no restrictions if there are no plates arranged in the tube. Since Saito does not arrange separating plates, the subsequent limitations are irrelevant.

Likewise for claim 12, there is no positively recited step. Since Saito does not have an auxiliary heater, the particular heating and melting steps need not be discussed.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Drouart 5931984 alone, or in view of Kaiser 4030901.

Drouart discloses the invention substantially as claimed. However Drouart does not disclose a muffle tube. It is well known in the art to have a muffle tube in the furnace for any or all of their well known advantages: protect the preform, protect the

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heating element(s); to provide a more even heat distribution. It would have been obvious to provide a muffle tube in the Drouart invention for any of its well known advantages. Kaiser is cited as providing evidence that it is known to provide muffle tubes within draw furnaces to protect heater elements.

Looking to Drouart: Feature 1 is the dummy rod. The inner tube comprises feature 13, 11A, and the structure (immediately below 11A) represented by a rectangle in figures 1-3. Such would be at least indirectly connected to the obvious muffle tube.

There is no indication of what sort of gas is in the tube - however it is clear that the entire invention is directed to keeping the external environment out. Furthermore, the figures show two arrows on the left (one near the top of 11 and one near the bottom). Col. 1, lines 48-49 indicate that there is "controlled pressurization". It would have been obvious to one of ordinary skill that the arrows of the drawings represent a flow of gas into the chamber. It would have been further obvious to use an inert gas, because a non-inert gas means it is a reactive gas - which can serve to react with the fiber, or any other structure - and this is not desired.

The bent plate between 13 and 11A (figure 4) is deemed to be the partition/plate.

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Allowable Subject Matter

Claims 3 and 6,7, 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claim 11 have been considered but are moot in view of the new ground(s) of rejection.

It is argued that the descending with the preform during drawing is not disclosed in Kobayashi. This is largely irrelevant because the claims are apparatus claims. A step of descending is not structure. See the rejection for the manner in which the claim limitations are met.

It is argued that the Saito reference is antedated by a priority document. Although a translation has been submitted, it is not in accordance with 37 CFR 1.55 - namely there is no statement that the translation is accurate. Further, the top of page 13 of the translation is missing.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is 703-308-0469. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7115 for regular communications and 703-305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

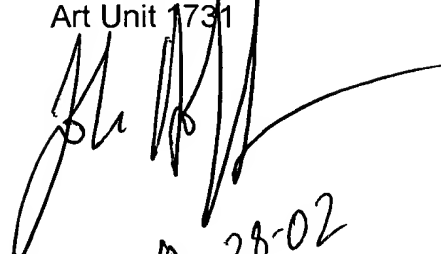
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John Hoffmann
Primary Examiner
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jmh
October 28, 2002



10-28-02